Introductory Chapters to
U.S. Industry and Trade Outlook® '99

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Highlights of *Outlook '99*

The U.S. economy has done extremely well in recent years, as robust economic growth has pushed the unemployment rate down to around 4.5 percent while inflation has remained low. In this setting, most industry sectors have done well. However, the economy is now in transition to a lower and more sustainable rate of growth of 2 to 2.5 percent (in contrast to the more than 3 percent growth of 1998). Consumer and investment spending, which have been major sources of domestic demand, are expected to slow in 1999. Weakness in international trade, especially as a result of the Asian crisis, will be an important factor in weakening demand for manufactures, which will in turn impact on other elements of the economy. Business activity in services will tend to slow as growth in incomes and employment subsides in the overall economy.

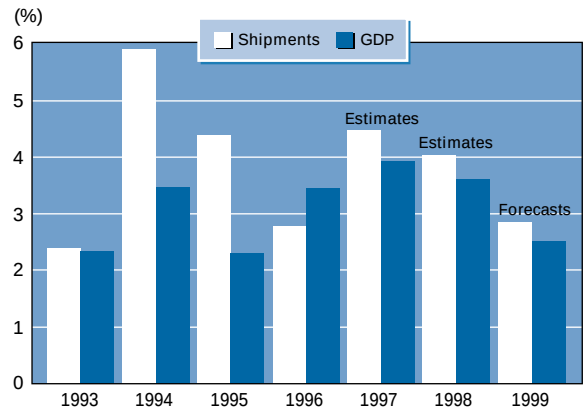
These trends are reflected in the forecasts for industry shipments and production of services. Industry shipments have generally tracked GDP closely (see Figure E-1). Shipments for the manufacturing sectors forecast in the *Outlook* are expected to slow considerably in 1999.

TRADE EFFECTS

International trade has a great impact on the overall economy. Trade (exports plus imports) has grown relative to the domestic economy from under 10 percent of the total economy in 1960 to 25 percent in 1998. The dependence on international trade is even more apparent in goods trade (that is, excluding services and construction), where exports have risen to over 25 percent of goods GDP (see Figure E-2).

Economic growth abroad is expected to be relatively weak in 1999, as it was in 1998. Combined with the strong U.S. dollar, this will result in a weak U.S. export performance. Despite the

Growth in GDP and Manufacturers' Shipments* Compared, 1993–1999

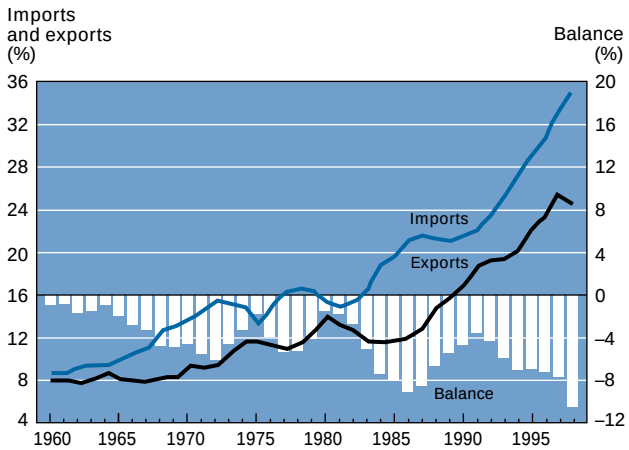


Shipments include only manufacturing industries forecast in the *U.S. Industry & Trade Outlook '99.*

Source: U.S. Department of Commerce, Bureau of the Census; *Outlook '99* estimates.

FIGURE E-1

Trade as a Share of GDP (Goods Only), 1960–1998



The basis is constant dollars. 1998 reflects three-quarters of year data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

FIGURE E-2

TABLE E-1: Trends in Selected Manufacturing Sectors
(billions of 1992 dollars except where noted)

Sector	Value of Industry Shipments, 1999	Percent Change at Annual Rates		
		92–97	97–98	98–99
Aerospace	143	–3.0	20.9	4.7
Chemicals	213	1.5	0.7	1.9
Construction materials	37	4.9	3.1	2.3
Consumer durables (selected)	85	3.3	2.2	1.2
Food and kindred products	451	1.4	1.6	2.0
Industrial supplies	404	3.1	2.3	2.0
Information technology	420	11.4	7.6	8.0
Instruments, medical and dental equipment	108	5.8	5.0	5.0
Machinery and equipment	184	6.4	0.9	1.1
Motor vehicles and parts	353	5.3	3.3	0.7
Printing and publishing	173	0.4	1.0	1.0
Textiles, apparel, and leather	167	1.2	0.7	0.9

Source: *U.S. Industry & Trade Outlook '99.*

deterioration in international trade and its concomitant impact on the manufacturing sector, the economy overall is expected to grow moderately during 1998 and 1999. Nevertheless, there will be substantial variation by sector. Table E-5 provides a summary of forecasts for the manufacturing sector.

MANUFACTURING SECTORS

Information technologies will continue to be a mainstay of growth and especially of capital spending. Demand for computers, networking equipment, and telecommunications equipment are expected to continue their strong growth, though at a slower pace than in recent years. Other capital goods sectors will be slowing even more. Shipments of the aerospace industries will return to a more moderate growth rate in 1999 after surging in 1997 and 1998. Traditional capital goods industries such as machinery will slow even more, with construction equipment and oil and gas field equipment posting negative growth. Cyclical industries (those whose ups and downs closely track the economy) will reflect the slowing of the economy. This is especially true for chemicals and other industrial supplies. Shipments of construction materials and supplies had picked up in the mid-1990s with the resurgence of construction, but with construction growth slowing, demand for materials will also fall off in 1999. Weak export markets are also an important factor in the dampened prospects for chemicals and machinery, since both are very dependent on export sales. Shipments of selected consumer durables as shown in Table E-1 will grow slowly. Consumer expenditures on consumer durables as measured in the National Accounts can be expected to grow more rapidly since the category includes expenditures on computers and related equipment. Shipments of motor vehicles and parts is expected to show only modest growth after a good 1998 performance, but deliveries will still be in the 15 million unit plus range. Other industries closely tied to consumer spending on nondurables—food processing and textiles and apparel—are expected also to show only modest growth, reflecting the overall slowing of consumer demand in 1999.

The fastest growing industries are, with one exception, high-technology industries, and all are industries in which the United States is highly competitive worldwide (see Table E-2). Three of these sectors are centered on aerospace—aircraft engines and

TABLE E-2: Ten Fastest Growing Manufacturing Industries in 1999
(based on shipments valued in 1992 dollars)

SIC	Industry	Chapter	Annual Growth Rates, %		
			92–97	97–98	98–99
3672	Printed circuit boards	16	11.1	9.0	14.0
3769	Space vehicle equipment, nec	21	–4.8	9.0	12.8
3761	Guided missiles and space vehicles	21	–2.8	16.0	11.0
3674	Semiconductors and related devices	16	24.6	8.9	10.2
3663	Radio and TV communications equipment	31	13.0	15.0	10.0
3764	Space propulsion units and parts	21	–10.1	12.6	9.9
357A	Computers and peripherals	27	11.3	8.5	8.7
367A	Passive components	16	8.2	6.3	8.0
3548	Welding apparatus	17	2.9	6.2	7.3
3661, 3663	Telecommunications equipment	31	11.5	9.8	6.9

Source: *U.S. Industry & Trade Outlook '99.*

TABLE E-3: Ten Slowest Growing Manufacturing Industries in 1999
(based on shipments valued in 1992 dollars)

SIC	Industry	Chapter	Annual Growth Rates, % 92–97	97–98	98–99
3171	Women's handbags and purses	34	–14.7	–13.9	–11.1
3172	Personal leather goods, nec	34	–9.8	–9.4	–9.5
3531	Construction machinery	18	11.2	–3.6	–6.4
3812	Search and navigation equipment	31	–4.5	–3.9	–3.9
3532	Mining machinery	18	4.4	–9.6	–3.5
3151	Leather gloves and mittens	34	–3.5	–17.9	–3.1
3111	Leather tanning and finishing	34	0.3	0.7	–3.0
3555	Printing trades machinery	18	6.0	2.6	–2.6
3634	Electric housewares and fans	38	0.7	–4.2	–1.9
2711	Newspapers	25	–1.5	–1.0	–1.5

Source: *U.S. Industry & Trade Outlook '99.*

TABLE E-4: Trends in Nonmanufacturing Industries

Sector	Chapter	Unit of Measure	1999 Value	Annual Growth Rates, % 95–97	97–98	98–99
Nonservices						
Coal mining	2	Production, millions of short tons	1,128	2.6	3.1	0.5
Natural gas production	3	Production, trillions of cubic feet	20	0.7	1.1	6.8
Crude petroleum	3	Production, thousands of barrels/day	6,280	–1.1	–0.3	–1.7
Refined petroleum	4	U.S. refinery output, millions of barrels/day	17	2.4	1.1	0.9
Electricity	5	Sales, billions of kilowatt-hours	3,258	2.0	2.7	1.5
Construction	5	Value put in place, billions of $1992	525	3.4	2.5	1.0
Titanium ingot	6	Production, thousands of metric tons	63	21.5	2.0	5.0
Lead	14	Production, thousands of metric tons	1,435	2.4	–3.8	4.7
Refined copper	14	Production, thousands of metric tons	2,610	3.4	3.7	3.2
Aluminum	14	Shipments, thousands of metric tons	10,890	3.6	3.1	3.0
Zinc	14	Production, thousands of metric tons	402	3.3	3.4	0.5
Services						
Environmental services	20	Revenues, $ billions	94	n.a.	2.2	2.0
Information retrieval services	26	Value added, $ billions	8	13.1	26.7	26.7
Data processing and network services	26	Value added, $ billions	34	13.5	15.0	15.1
Professional computer services	26	Value added, $ billions	95	13.3	14.7	15.1
CAD/CAM/CAE software	28	Revenues, $ billions	3	n.a.	13.0	14.0
Space commerce	29	Launch revenues, $ millions	992	24.6	16.0	14.0
Telecommunications services	30	Value added, $ billions	270	10.3	8.0	8.0
Cable television	32	Revenues, $ billions	32	17.0	16.1	11.1
Movies: box office	32	Revenues, $ billions	7	7.9	4.7	4.5
Home video	32	Revenues, $ billions	18	5.8	2.4	2.3
Recorded music	32	Revenues, $ billions	13	–0.4	0.8	1.6
Merchandise, wholesale	41	Sales, $ billions	2,776	5.6	5.7	4.0
Retailing	42	Sales, $ billions	2,804	5.5	4.5	3.7
Railroads	43	Billions of ton-miles	1,390	1.6	1.6	1.5
Health care	44	Expenditures, $ billions	1,200	4.5	5.0	5.6
Life and health insurance	46	Premium receipts, $ billions	395	3.9	3.8	3.9
Commercial banking	46	Business loans, $ billions	964	8.9	7.1	6.3
Mutual funds industry	47	Assets, $ billions	6,196	26.2	17.3	17.6
Securities industry	47	Revenues, $ billions	268	20.3	14.4	12.8
Commodity trading	48	Futures contracts, millions	462	1.0	5.0	5.5
Management, consulting, and public relations	48	Revenues, $ billions	147	10.6	12.1	13.1
Accounting, auditing, and bookkeeping	48	Revenues, $ billions	72	10.9	9.6	9.5
Advertising	49	Revenues, $ billions	37	9.6	6.3	7.1
Legal services	49	Revenues, $ billions	148	6.3	6.1	6.5
Public and private education	49	Receipts, $ 1994/95 billions	546	2.2	2.1	1.5

Source: *U.S. Industry & Trade Outlook '99.*

parts, guided missiles, and space vehicles. Growth in shipments in these areas was very strong in 1998 but will slow somewhat in 1999. Exports have been the most dynamic part of the current cyclical upswing in the aerospace industry. The continued strength of computers, semiconductors, and communications equipment reflects the ongoing digital revolution, which is transforming the ways in which goods and services are produced, the kinds of goods consumed, and the modes of personal communication and interaction.

The manufacturing industries with the slowest growth reflect a number of trends (see Table E-3). Footwear and leather goods reflect slow growth in demand as well as a continued shift to overseas suppliers. Other declining industries present a different picture. Shipments of oil and gas field machinery are dropping in the wake of lower oil prices and hence less drilling. Construction machinery shipments are off as a result of a slowdown in construction, while the decline in search and navigation equipment shipments reflects continued weakness in defense procurement. Though newspapers continue to contract, the aging baby boomer population is expected to give a boost to readership of print and online versions.

SERVICES

Trends in the services sector to a significant degree mirror those in manufacturing (see Table E-4). The fastest-growing services industries are dominated by information technologies, including information services, data processing, and professional computer services. Not surprisingly, the mutual fund and securities industries are expected to continue to grow apace, as the stock and bond markets continue to post record trading volumes. Strong growth is also expected in management consulting and accounting. This growth partly reflects the continued trend by many companies to contract out, or "outsource," for a host of business services. Noticeably absent from the top ten rapid growth sectors is health services. While growth in health services continues to be well above the rate of inflation, it is significantly below the double digit rates common in the 1980s and early 1990s.

(See the following table for forecasts in the manufacturing sector.)

Jonathan C. Menes, U.S. Department of Commerce, Office of Trade and Economic Analysis, December 1998.

TABLE E-5: Forecast Growth Rates for 137 Manufacturing Industries and Groups
(millions of 1992 dollars except as noted)

SIC	Industry	Chapter	Value of Industry Shipments, 1999	Annual Growth Rates, %		1999 Rank	Rank Based on 92–97 Growth
				92–97[1]	98–99		
2015	Poultry slaughtering and processing	35	29,710	3.1	3.3	26	65
201A	Red meat	35	74,300	0.3	1.0	89	112
206A	Snack foods	35	12,310	3.0	2.1	49	67
2082	Malt beverages	35	18,050	0.4	1.0	86	108
2084	Wines, brandy, and brandy spirits	35	5,766	4.8	3.0	35	36
2085	Distilled and blended liquors	35	3,457	–0.2	1.7	61	115
2096	Potato chips and similar snacks	35	9,030	3.5	2.0	56	55
221	Cotton broadwoven fabric mills	9	6,650	2.2	0.8	98	78
222	Man-made broadwoven fabric mills	9	10,000	2.1	1.0	85	79
223	Wool broadwoven fabric mills	9	1,800	2.0	0.6	104	83
225A	Weft, lace, and warp knit fabric mills	9	7,870	0.7	1.8	58	101
227	Carpets and rugs	9	11,150	2.0	1.6	64	84
2281	Yarn spinning mills	9	8,750	2.3	0.6	103	75
2311	Men's and boys' suits and coats	33	1,911	–4.7	0.7	99	139
2321	Men's and boys' shirts	33	5,134	–3.2	–0.4	122	134
2322	Men's and boys' underwear and nightwear	33	576	–6.8	0.5	105	142
2323	Men's and boys' neckwear	33	646	0.4	–0.8	127	106
2325	Men's and boys' trousers and slacks	33	7,167	2.3	–1.2	136	76
2326	Men's and boys' work clothing	33	1,820	4.2	–1.0	134	46
2331	Women's and misses' blouses and shirts	33	3,694	–1.7	0.0	116	131
2335	Women's, juniors', and misses' dresses	33	7,036	5.4	1.4	73	30
2337	Women's and misses' suits and coats	33	3,995	–2.3	1.1	82	132
2341	Women's and children's underwear	33	2,315	–0.8	–0.2	120	124
2342	Bras, girdles, and allied garments	33	1,794	2.9	–1.4	137	71
2361	Girls' and children's dresses, blouses	33	1,693	–0.2	1.3	77	116
2369	Girls' and children's outerwear, nec[2]	33	2,325	8.7	–0.3	121	9
2386	Leather and sheep-lined clothing	34	211	0.4	–0.9	131	109
239A	Textile house furnishings	33	7,079	0.6	–0.5	124	103
239B	Miscellaneous textile products	33	14,212	3.3	0.5	107	62

[1] Compound annual growth rate.
[2] nec = not elsewhere classified.
[3] Shipments are valued in current dollars.
Source: U.S. Department of Commerce, Bureau of the Census; *U.S. Industry & Trade Outlook '99* forecasts.

TABLE E-5: Forecast Growth Rates for 137 Manufacturing Industries and Groups *(Continued)*

(millions of 1992 dollars except as noted)

SIC	Industry	Chapter	Value of Industry Shipments, 1999	Annual Growth Rates, % 92–97[1]	Annual Growth Rates, % 98–99	1999 Rank	Rank Based on 92–97 Growth
2421	Sawmills and planing mills, general	7	23,900	1.9	1.5	70	86
2435	Hardwood veneer and plywood	7	2,298	0.1	1.1	80	114
2436	Softwood veneer and plywood	7	5,335	–0.3	0.7	100	118
2451	Mobile homes	8	7,075	9.7	1.3	76	8
2452	Prefabricated wood buildings	8	2,275	1.2	–0.9	130	95
2493	Reconstituted wood products	7	4,755	2.7	2.1	50	72
251	Household furniture	38	25,629	3.3	2.0	54	59
2611	Pulp mills	10	5,050	–1.4	2.0	53	128
2653	Corrugated and solid fiber boxes	10	23,114	1.8	3.3	25	88
2657	Folding paperboard boxes	10	9,042	1.8	1.8	59	89
26PM	Paper and paperboard mills	10	54,390	1.4	2.5	40	93
2711	Newspapers	25	30,559	–1.5	–1.5	138	130
2721	Periodicals	25	23,538	0.8	1.0	90	99
2731	Book publishing	25	18,491	1.6	1.5	68	91
2732	Book printing	25	5,200	1.8	1.0	92	87
2741	Miscellaneous publishing	25	10,876	–0.6	1.2	78	122
275	Commercial printing	25	63,759	1.7	2.0	52	90
2761	Manifold business forms	25	5,164	–6.6	3.1	30	141
2771	Greeting cards	25	4,129	–0.5	0.6	101	121
2782	Blankbooks and looseleaf binders	25	4,665	3.0	2.3	42	68
2789	Bookbinding and related work	25	1,634	3.7	2.5	38	52
279	Printing trade services	25	4,985	–0.3	–0.5	123	117
281	Industrial inorganic chemicals	11	25,800	–0.9	1.2	79	125
2821	Plastics materials and resins	11	40,160	3.5	3.2	29	56
2822	Synthetic rubber	12	4,891	2.1	2.1	48	82
282A	Man-made fibers	9	13,845	1.1	1.1	83	98
283	Drugs	11	83,702	3.1	2.5	41	64
286	Industrial organic chemicals	11	66,550	0.6	1.6	63	104
289	Miscellaneous chemical products	11	23,600	2.4	1.9	57	73
3011	Tires and inner tubes	12	15,767	5.3	0.9	95	33
3069	Fabricated rubber products, nec[2]	12	8,038	2.9	0.3	109	70
3111	Leather tanning and finishing	34	2,881	0.3	–3.0	141	111
3142	House slippers	34	96	–16.5	3.2	28	146
3143	Men's footwear, except athletic	34	2,022	–1.4	3.0	33	129
3144	Women's footwear, except athletic	34	363	–16.5	1.1	81	147
3149	Footwear, except rubber, nec[2]	34	413	7.0	2.0	55	19
3151	Leather gloves and mittens	34	93	–3.5	–3.1	142	136
3161	Luggage	34	1,044	2.1	3.3	27	81
3171	Women's handbags and purses	34	160	–14.7	–11.1	147	145
3172	Personal leather goods, nec[2]	34	209	–9.8	–9.5	146	143
3211	Flat glass	8	2,595	3.7	2.6	37	51
3241	Cement, hydraulic	8	4,820	3.1	0.8	97	66
3251	Brick and structural clay tile	8	1,290	3.3	–1.0	132	60
3253	Ceramic wall and floor tile	8	1,115	7.3	3.8	22	17
3275	Gypsum products	8	2,525	4.0	–0.9	129	48
331A	Steel mill products	13	73,200	4.3	1.5	65	45
343A	Plumbing parts	8	8,185	6.3	4.4	18	21
3441	Fabricated structural metal	8	11,740	4.4	2.2	46	43
3448	Prefabricated metal buildings	8	4,285	7.6	2.6	36	15
3451	Screw machine products	15	6,301	7.1	2.5	39	18
3452	Bolts, nuts, rivets, and washers	15	7,050	4.7	3.0	34	37
345A	General components	15	29,335	4.3	2.2	47	44
349A	Valves and pipe fittings	15	10,696	3.3	2.0	51	58
3511	Turbines and turbine generator sets	19	6,306	1.2	–0.2	119	94
3523	Farm machinery and equipment	18	14,905	7.8	2.3	44	14
3524	Lawn and garden equipment	38	7,143	6.1	1.0	88	23
3531	Construction machinery	18	20,142	11.2	–6.4	145	5
3532	Mining machinery	18	1,678	4.4	–3.5	143	41

[1] Compound annual growth rate.
[2] nec = not elsewhere classified.
[3] Shipments are valued in current dollars.
Source: U.S. Department of Commerce, Bureau of the Census; *U.S. Industry & Trade Outlook '99* forecasts.

TABLE E-5: Forecast Growth Rates for 137 Manufacturing Industries and Groups *(Continued)*

(millions of 1992 dollars except as noted)

SIC	Industry	Chapter	Value of Industry Shipments, 1999	Annual Growth Rates, %		1999 Rank	Rank Based on 92–97 Growth
				92–97[1]	98–99		
3533	Oil and gas field machinery	18	4,244	3.5	0.2	111	57
3544	Special dies, tools, jigs, and fixtures	17	14,329	7.9	2.3	45	13
3545	Machine tool accessories	17	6,284	8.0	6.5	11	12
3546	Power-driven handtools	17	3,857	4.4	4.4	19	42
3548	Welding apparatus	17	3,600	2.9	7.3	9	69
354A	Machine tools	17	6,575	3.6	1.5	69	54
3554	Paper industries machinery	18	3,040	4.5	–1.1	135	40
3555	Printing trades machinery	18	3,527	6.0	–2.6	140	24
3556	Food products machinery	18	2,814	1.5	4.0	20	92
3562	Ball and roller bearings	15	5,288	3.3	1.0	91	61
3565	Packaging machinery	18	4,117	3.9	4.0	21	50
357A	Computers and peripherals[3]	27	125,000	11.3	8.7	7	4
3585	Refrigeration and heating equipment	18	26,115	5.8	2.3	43	26
3612	Transformers, except electronic	19	5,414	5.7	0.2	110	28
3613	Switchgear and switchboard apparatus	19	6,905	4.1	0.1	113	47
3621	Motors and generators	19	10,887	6.5	–1.0	133	20
3625	Relays and industrial controls	19	10,690	6.2	0.5	106	22
3631	Household cooking equipment	38	3,725	3.9	0.9	94	49
3632	Household refrigerators and freezers	38	5,815	5.5	1.5	71	29
3633	Household laundry equipment	38	4,650	5.9	1.4	75	25
3634	Electric housewares and fans	38	2,820	0.7	–1.9	139	102
3635	Household vacuum cleaners	38	2,280	3.2	1.0	84	63
3639	Household appliances, nec[2]	38	3,350	–0.6	1.5	66	123
3661	Telephone and telegraph apparatus	31	35,731	10.1	3.3	24	7
3663	Radio and TV communications equipment	31	45,397	13.0	10.0	5	2
3671	Electron tubes	16	4,294	4.5	5.2	13	38
3672	Printed circuit boards	16	15,401	11.1	14.0	1	6
3674	Semiconductors and related devices	16	115,882	24.6	10.2	4	1
367A	Passive components	16	52,871	8.2	8.0	8	11
371A	Automotive parts and accessories	37	156,677	7.5	1.4	74	16
371B	Motor vehicles and bodies	36	195,919	3.7	0.1	115	53
3721	Aircraft	21	65,760	–4.0	3.5	23	137
3724	Aircraft engines and engine parts	21	25,884	–1.4	3.1	31	127
3728	Aircraft parts and equipment, nec[2]	21	23,744	–0.3	3.0	32	119
3731	Ship building and repairing	22	11,080	–1.1	5.0	15	126
3732	Boat building and repairing	39	5,153	1.9	0.6	102	85
3761	Guided missiles and space vehicles	21	21,645	–2.8	11.0	3	133
3764	Space propulsion units and parts	21	3,713	–10.1	9.9	6	144
3769	Space vehicle equipment, nec[2]	21	1,889	–4.8	12.8	2	140
3812	Search and navigation equipment	31	25,698	–4.5	–3.9	144	138
3825	Instruments to measure electricity	23	14,712	8.5	4.9	16	10
382A	Laboratory instruments	23	14,010	5.1	4.6	17	34
382B	Measuring and controlling instruments	23	23,629	5.4	5.3	12	32
384	Medical instruments and supplies	45	56,060	5.4	5.0	14	31
3861	Photographic equipment and supplies	24	26,200	2.3	1.8	60	77
3911	Jewelry, precious metal	40	4,313	0.4	0.0	117	105
3931	Musical instruments	40	1,035	0.4	1.5	72	110
3949	Sporting and athletic goods, nec[2]	39	10,211	5.0	1.7	62	35
394A	Dolls, toys, and games	39	4,426	0.2	0.1	114	113
3961	Costume jewelry	40	1,505	0.4	1.0	87	107

[1] Compound annual growth rate.
[2] nec = not elsewhere classified.
[3] Shipments are valued in current dollars.
Source: U.S. Department of Commerce, Bureau of the Census; *U.S. Industry & Trade Outlook '99* forecasts.

A

Getting the Most Out of *Outlook '99*

Welcome to the second edition of the *U.S. Industry & Trade Outlook*®, a joint publication of the U.S. Department of Commerce and The McGraw-Hill Companies. This volume replaces the *U.S. Industrial Outlook*®, which the Department of Commerce had published annually until 1994. Like its predecessor, the *U.S. Industry & Trade Outlook*® is a single reference source that business professionals, investors, researchers, and students can use to get information on U.S. industries, how these industries affect the U.S. economy, and where they are going in an increasingly global marketplace. Most of the chapters have been written by government analysts; also participating were McGraw-Hill authors (principally from Standard & Poor's DRI and Standard & Poor's Equity Investor Services) and independent analysts and industry experts. To ensure that the articles and forecasts are objective and unbiased, government economists have reviewed all chapters.

ANALYTICAL APPROACH: SIC CODES

The *'99 Outlook* continues to be based on the Standard Industrial Classification system, which classifies industries by SIC codes and uses these codes as the basis for collecting most of the data on domestic industries. This classification system includes all sectors, from manufacturing and service industries to construction, agriculture and natural resources. The SIC system begins with nine major categories: (1) agriculture, forestry, and fishing; (2) mining; (3) construction; (4) manufacturing; (5) transportation, communications and public utilities; (6) wholesale trade; (7) retail trade; (8) finance, insurance and real estate; and (9) services. These basic categories are, in turn, divided into groups with two-digit, three-digit, and four-digit industry codes, where each additional digit indicates a greater degree of specificity.

WHAT TO LOOK FOR IN EACH CHAPTER

Economic and Trade Trends Graphs

Each chapter begins with this full-page feature. Most manufacturing industries, which make up 29 of the 50 chapters, have a standard set of these graphs. In addition to U.S. international trade, the graphs include the following:

World Export Market Share. The world export market share data have been developed from international trade information provided by the United Nations, which collects such information from various countries. These data are classified by Standard International Trade Classifications (SITC), Revision 3, which does not correspond to the 1987 SIC system used for U.S. domestic industries. To resolve this disparity, the two classification systems were matched where possible at the four-digit SIC level. Where the worldwide international trade data would not accurately reflect the SIC industries included in the chapter, no data are presented. The world export market share graph reflects available data through 1996. Such data account for about 75 percent of total world trade in 1996.

Export Dependence and Import Penetration. The export dependence ratio is derived by dividing exports by comparable domestic shipments; the import penetration ratio is derived by dividing imports by the sum of shipments and imports less exports (apparent consumption). The ratios do not necessarily use the shipments data included in the Trends and Forecasts tables (discussed below); shipments data were modified to reflect all traded commodities of a particular sector.

Output and Output Per Worker. Constant-dollar industry shipments are used as a proxy for output. Output per worker for each industry is defined as industry shipments (adjusted for price changes) divided by total employment and expressed as an index

NEW CLASSIFICATION SYSTEM

Federal statistical data collected on or after January 1, 1997, use the new North American Industry Classification System (NAICS). The Standard Industrial Classification (SIC) system has been used to classify industry sectors in the U.S. economy since 1940. The last major revision of the SIC was in 1987. However, the basic structure has remained substantially the same since its introduction.

Two major criticisms have been leveled at the current SIC: it focuses too heavily on manufacturing, and it gives little recognition to the growing service sector that now represents 75 percent of GDP. NAICS is based on a production concept. Classifying an industry by production means that establishments using similar processes and inputs to produce a good or service are grouped together. Inputs include types of labor and skills, capital equipment, and intermediate materials. In many cases intangible inputs may be important, especially in the services industries.

For the manufacturing industries, most of the effort was spent on harmonizing the systems of the United States, Canada, and Mexico and addressing the statistical needs of U.S. industries. The United States will have approximately the same number of manufacturing industries in the NAICS as it did in the SIC. A new subsector has been created for computer and electronic product manufacturing to reflect the growth in advanced technologies.

In addition to the changes in the manufacturing industries, three new sectors have been created that did not exist within the SIC system:

(1) The information sector brings together such industries as publishing, motion picture and video, sound recording, broadcasting, telecommunications, libraries, on-line information services, and data processing. The concept is to group three types of establishments: those engaged in producing and distributing information, those that provide the means to distribute these products as well as data or communications, and those that process data or transactions.

(2) The professional, scientific, and technical services sector includes those establishments engaged in processes that involve significant human capital. This sector includes legal, architectural, and engineering services, and firms engaging in management consulting, public relations, and advertising. These establishments use the knowledge and skills of their employees to deliver services to the client.

(3) The health-care and social assistance sector was developed because it is difficult to distinguish the boundaries of health care and social assistance. These industries range from those that provide acute (doctors/hospitals) to minimal health care with social assistance to those providing only social assistance, such as housing facilities for the elderly.

The final listing of NAICS industries appeared in the *Federal Register* of April 9, 1997, and is also available on the Internet at www.census.gov/epcd/www/naics.html#fedreg.

based in 1992. The raw data are presented in the trends and forecasts tables. At the national level, output is for private nonfarm business, adjusted for inflation. Private nonfarm business output is gross domestic product (GDP) minus the sum of agricultural output and the output of the government sector. The Bureau of Labor Statistics (BLS) has provided data on total employment.

Trends and Forecasts Tables

The Trends and Forecasts table is a standard feature of every chapter. Tables in manufacturing chapters follow a specific format. The industry is defined by SIC codes, and the table contains up to 8 years of statistics. Tables in this edition contain industry and product data from 1992 through 1999. Shipments data through 1996 are actual; for 1997 and 1998, estimates; and 1999, forecasts. (Trade data through 1997 are actual.) The value of shipments in the trends and forecasts tables is generally shown in both "current" and "constant" dollars. The constant dollars in the *Outlook*'s Trends and Forecasts tables are identified as "value of shipments (1992$)." This means that output is valued using 1992 prices. (See the accompanying glossary for further explanation.) Historical data are also provided for capital investment and earnings (both in current dollars) and for employment.

The difference between industry and product shipments is important for interpreting the statistics in this book. Shipments data are collected separately for individual factories or establishments rather than for entire companies. Although most factories or establishments make or sell a variety of products, for statistical purposes individual concerns are classified under the industry of their most prominent product. For instance, if 80 percent of a plant's total output is tires and 20 percent is hose and belting, then that plant is classified as a tire industry plant. The total output of all such plants make up the industry shipments for the industry. Other measures of activity under the "industry" heading, such as employment and hourly earnings, are reported for the establishments classified in that industry.

The value of all tires shipped by all establishments is added to derive "product shipments." In other words, "industry shipments" refers to the total value of all activities conducted by establishments classified in an industry. "Product shipments" can be thought of as the total value of specific products classified within an industry shipped by all establishments, regardless of how these establishments are classified.

When a plant's products change substantially, the industry under which the plant is classified may change as well. Despite such changes, historical data are not revised, which can result in significant discontinuities. The reader should, therefore, use care in relating industry statistics (such as employment) to product statistics because an industry's product mix may change.

Trade Patterns Tables

These tables include data on exports and imports for the six major areas of the world and on the United States' top purchasers and suppliers of merchandise. The six major regions are

NAFTA (North American Free Trade Agreement countries of Canada and Mexico), Latin America (all other countries in the western hemisphere, except Canada and Mexico), Western Europe (all countries in the region, whether a European Union member or not), Japan/Chinese Economic Area (Japan, China, Hong Kong, and Taiwan), Other Asia (all countries on the Asian continent except the Japan/Chinese Economic Area and the Middle East), and Rest of world (Eastern Europe and former Soviet states, the Middle East, Africa, Australia, New Zealand, and other Pacific countries and territories).

Data Sources and Methods

Industry and Product Data. For manufacturing industries, the most reliable and consistent federal data source of historical data on such items as value of shipments, employment and wages, and capital investments is the *1992 Census of Manufactures*, revised and updated by the *Annual Survey of Manufactures*. Mining industry data are published in the *1992 Census of Minerals;* data for subsequent years are available from the U.S. Department of the Interior, Bureau of Mines. Data for many service industries are included in the Census Bureau's Service Annual Surveys, which are current through 1996.

Trade Data. Census trade data (exports and imports) are tabulated following the Bureau of the Census' trade concordance, as adjusted by the various analysts to approximate their four-digit SIC industry grouping. Census data on U.S. merchandise trade are current through 1997. Trade data are collected using the Harmonized System (HS), a procedure the United States adopted in 1989. Most major industrial countries and many less-developed countries use the HS, making it easier to assess and compare recent (but not pre-1989) international trade by commodity for various countries.

Analysis of trade data over a longer period is more difficult, however. Since trade data used to be collected and tabulated differently, it cannot be determined if apparent changes in the value of trade by category before and after 1989 are due to actual trade developments or to changes in reporting and classifying practices.

WHERE TO FIND MORE INFORMATION

Two federal government resources of general interest to U.S. businesses are *A Basic Guide to Exporting,* which discusses exporting strategies and related issues, and the U.S. Trade Information Center (1-800-USA-TRADE), the definitive source for information on U.S. government export programs and activities.

Free catalogs listing government publications may be ordered from the Superintendent of Documents at the Government Printing Office (GPO) by calling (202) 512-1800 or by faxing an order to (202) 512-2250. (The GPO's Internet address is www.access.gpo.gov.) Call the National Technical Information Service at (703) 487-4650 for ordering information and catalogs on thousands of government publications or visit the Web site at www.ntis.gov. In addition, the U.S. Bureau of the Census has made statistical information available on its Web site at www.census.gov.

The government documents mentioned can be found in the reference section of many libraries or on the Web sites of university and state libraries participating in the Federal Depository Library program. Useful nongovernment sources of business information include *Thomas' Register, Standard & Poor's Register, Ward's Business Directory, Dun's Industrial Guide,* and reports by Dun & Bradstreet and Standard & Poor's, among others. Directories of trade associations that can be found in reference sections of libraries include the *Encyclopedia of Associations, National Trade & Professional Associations of the U.S.,* and the *Yearbook of International Organizations.*

GLOSSARY OF KEY TERMS

APEC: The Asia-Pacific Economic Cooperation group was established in 1989 in response to the growing interdependence among Asia-Pacific economies. Begun as an informal dialogue group, APEC has become the primary regional vehicle for promoting open trade and economic cooperation within the region. As of November 1998, its members are (in order of joining) Australia, Brunei Darussalam, Canada, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, the United States, China, Hong Kong, Taiwan, Mexico, Papua New Guinea, Chile, Peru, Russia, and Vietnam.

Antidumping duty: A duty imposed by the United States to offset any profits that a foreign firm attempts to make by dumping merchandise on the U.S. market. (See Dumping.)

ASEAN: Association of Southeast Asian Nations, consisting of Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

CAGR: Compound annual growth rate.

Caribbean Basin Initiative (CBI): An inter-American program, led by the United States, of increased economic assistance and trade preferences to Caribbean and Central American countries. CBI provides duty-free access to the U.S. market for most products from the region and promotes private sector development in the region.

c.i.f.: Cost, insurance and freight. A pricing term indicating that the cost of the goods, insurance, and freight are included in the quoted price.

Constant dollars (or "real" dollars): Output values converted to a base price level, calculated by dividing current (or actual) dollars by a deflator. Use of constant dollars eliminates the effects of price changes between the year of measurement and the base year and allows calculation of real changes in output.

Consumer Price Index (CPI): Measures a weighted average price level of a representative basket of goods and services purchased by consumers.

Countervailing duty: A retaliatory charge that a country places on imported goods to counter direct or indirect subsidies or bounties granted to the exporters of the goods by their home governments.

Current dollars: The actual dollar amount paid in sales transactions.

Dumping: A term used in international trade that refers to the sale of a product in export markets below the selling price for the same product in the exporter's domestic market, or lower than the cost of manufacturing and marketing such goods in the domestic market.

Durable goods (durables): Items with a normal life expectancy of 3 years or more, such as automobiles, furniture, and major household appliances. Sales of durable goods are generally postponable and, therefore, are the most volatile component of consumer expenditures.

Euro: The basic unit of the new common European currency, which will begin to be used on January 1, 1999. Initially, only 11 of the 15 European Union member countries will participate. Denmark, Greece, Sweden, and the United Kingdom will continue to maintain their national currencies.

Eurodollars: Deposits held in denominations of U.S. dollars in commercial banks outside the United States.

European Currency Unit (ECU): An international unit of account created for the European Monetary System (EMS), to be used as the denominator of EMS debts and credits and as a reserve credit in the European Monetary Cooperation Fund (EMCF). The ECU is an index composed of a weighted basket of currencies of EU members. The ECU will go out of existence upon the introduction of the euro on January 1, 1999.

European Union (EU): A regional economic/political organization forming the largest trading bloc in the world. Its 15 members are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

Export-Import Bank (Eximbank): An autonomous agency of the U.S. Government created in 1934 to facilitate the export trade of the United States.

f.a.s. (free alongside ship): The transaction price of an export product, including freight, insurance, and other charges incurred in placing the merchandise alongside the carrier in the U.S. port.

f.o.b. (free on board): Without charge for delivery of export merchandise to, and placing on board, a carrier at a specified point.

Foreign trade zones (FTZs): Designated areas in the United States, usually near ports of entry, considered to be outside the customs territory of the United States. Also known as free trade zones.

G-7 (Group of Seven): Seven industrial countries: the United States, Japan, Germany, France, the United Kingdom, Italy, and Canada. G-7 heads of state and/or government have met at annual economic summits since 1975. G-7 finance ministers meet periodically to discuss economic issues of common concern.

General Agreement on Tariffs and Trade (GATT): An international organization and code of tariffs and trade rules that has evolved out of the multilateral trade treaty signed in 1947. It was replaced by the World Trade Organization (WTO) on January 1, 1995.

Generalized Agreement on Trade in Services (GATS): Expands the rules on trade in goods that were negotiated under GATT auspices to include trade in services.

Generalized System of Preference (GSP): A system approved by GATT in 1971 that authorizes developed countries to give preferential tariff treatment to developing countries.

Gross domestic product (GDP): The value of all goods and services produced in a country during a specified time period. (See Value added)

Harmonized System (HS): An international convention, implemented by the United States in 1989, for classifying imports and exports so that data from different countries are compalable.

Industry shipments: The total value of products shipped by establishments classified as being in the industry, plus miscellaneous receipts.

Intellectual property: Includes trademarks, copyrights, patents, and trade secrets.

International Monetary Fund (IMF): Established in 1945, the IMF serves as a permanent forum for its member countries to discuss and to coordinate economic and financial policies. Its capital is derived from subscriptions from member countries and is used to provide assistance to members facing relatively short-term economic difficulties.

IPR: Intellectual property rights; in general, the right to possess or control the use of intellectual property.

Table of Contents

B

Economic Assumptions of *Outlook '99*

U.S. Industry & Trade Outlook '99 provides estimates of near-term growth for major sectors of the economy. Those estimates reflect, in part, the major economic assumptions that are described in this chapter. The estimates also reflect the knowledge of analysts from the U.S. Department of Commerce and from Data Resources Incorporated (DRI) of the specific circumstances influencing the industries that the analysts follow. That knowledge is conveyed in Chapters 1 through 50.

U.S. Economy in 1997 and 1998

A brief review of economic developments in 1997 and 1998 provides a helpful introduction to the projections for 1999 and 2000. The current expansion celebrated its seventh birthday in March 1998. In November 1998, the expansion will set an endurance record for peace-time expansions of 92 months, bettering the record posted in the 1983–1990 expansion. The longest expansion on record, in 1961–1969, lasted 106 months and coincided with the Vietnam War.

The health of the economy has been demonstrated by the first federal government surplus since 1969, the lowest rates of inflation and unemployment in a generation, and robust business investment. The momentum of these trends is being slowed by the influence from overseas economies, especially those in Asia. A strike at GM and a fall in inventory investment contributed to slower growth in real gross domestic product (GDP) in the second quarter. Deterioration in the trade deficit also subtracted from overall growth in the first half of 1998. Available data at midyear were consistent with moderate growth in the second half of the year.

As of September 1998, private analysts (*Blue Chip* consensus) anticipated that real GDP would grow 3.4 percent in 1998 (year over year), down slightly from the robust 1997 gain of 3.9 percent. Analysts also expected consumer prices to rise about 1.6 percent in 1998, down from the 1997 pace of 2.3 percent. Lower prices for energy accounted for the overall moderation.

Federal Government's Budget

The economy's strong growth in 1997 and early 1998, combined with modest growth in outlays, led to the elimination of the federal government's deficit. The administration's efforts to restore federal fiscal responsibility can be traced back to the effects of the Omnibus Budget Reconciliation Act of 1993. Data available in late September indicated a budget surplus of roughly $70 billion for the fiscal year (FY) 1998, the largest surplus as a percent of GDP since the 1950s. The budget, as a percent of GDP, shifted from a 4.7 percent deficit in FY1993 to a surplus of roughly 0.8 percent in FY1998.

The elimination of the deficit since FY1989, the fiscal year before the last recession, reflected almost equal rise in receipts relative to GDP and a drop in outlays relative to GDP (see Figure B-1).

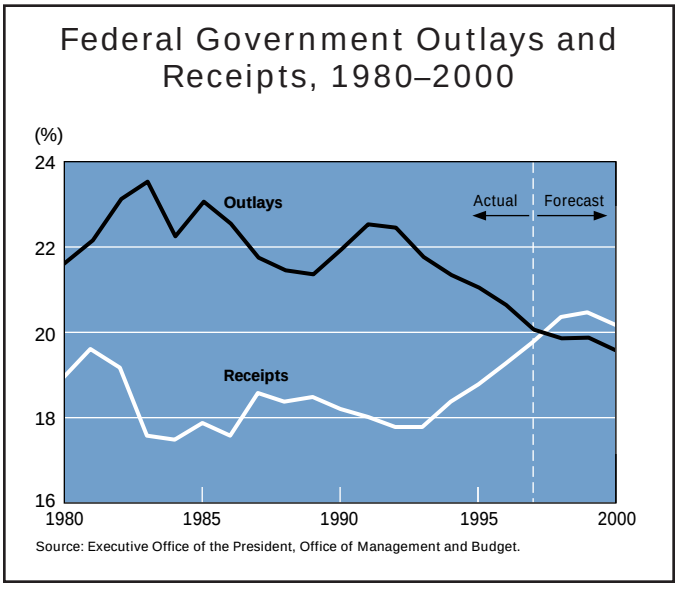


FIGURE B-1

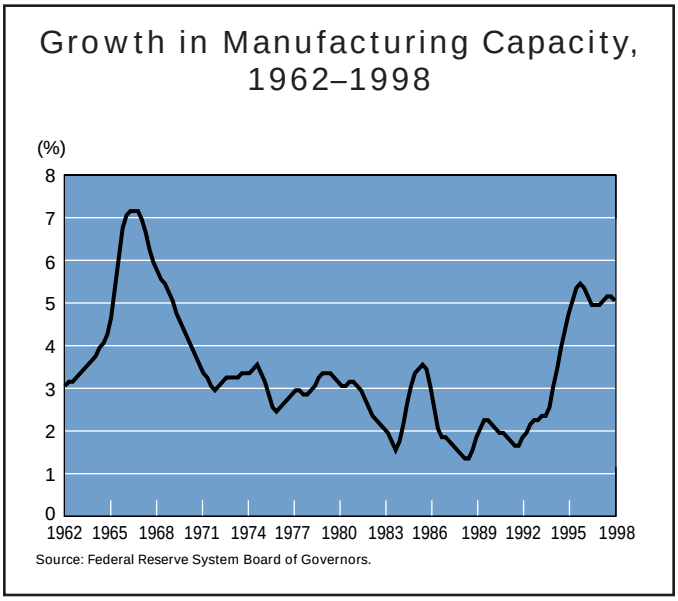


FIGURE B-2

The dramatic swing from deficit to surplus has freed financial resources for the private market and has lowered interest rates. Between the fourth quarter of 1989 and the second quarter of 1998, federal government spending for goods and services (adjusted for inflation) fell 2.9 percent at an annual rate. Over these 33 quarters, private spending for consumption and investment rose 3.2 percent at an annual rate.

Business Investment

As new federal borrowing has been reduced, private investment has flourished. Strong growth in business investment in structures and equipment has contributed importantly to the health of the current expansion. Its contribution has been both direct and indirect. Business investment (after adjusting for inflation) accounted directly for roughly one-third of overall GDP growth between 1993 and the first half of 1998, although it accounted for only 9 percent of the level of GDP in 1997.

The advances in investment have indirectly contributed to the expansion's health by significantly boosting the rate of capacity growth—the capacity of the overall economy to produce goods and services. Figure B-2 shows that manufacturing capacity has grown over 5 percent per year since mid-1995, the fastest pace since mid-1969 and more than twice the rate of increase posted at the end of the last expansion in 1989. Since 1990, the growth of capacity has essentially matched the gains in manufacturing production and, as a consequence, pressures on capacity have not developed in the current expansion. Capacity utilization in 1997 and so far in 1998 has remained close to its long-term average and well below rates posted toward the end of all recent expansions.

The moderate levels of capacity utilization from 1997 through mid-1998 contributed importantly to the low inflation in the U.S. economy. Moderate operating rates indicate an absence of inflationary pressures from capacity constraints. The longer-term downward trend in U.S. prices for imported goods has also contributed to the absence of inflationary pressures. Lower import prices directly affect the prices paid by consumers for imported goods at the retail level. Lower prices also indirectly affect the prices charged by domestic producers, via lower costs for materials inputs and greater competitive pressures.

Inflation

All post-World War II expansions have come to an end because serious imbalances developed which, in turn, led to inflationary

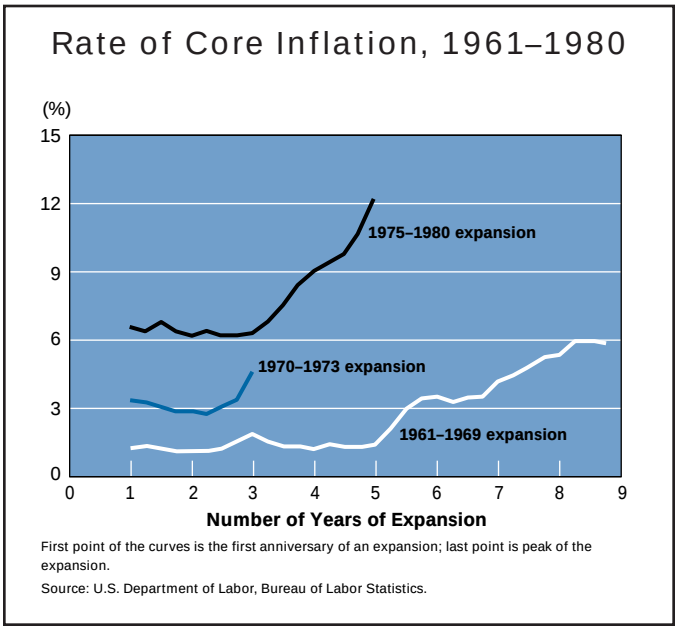


FIGURE B-3

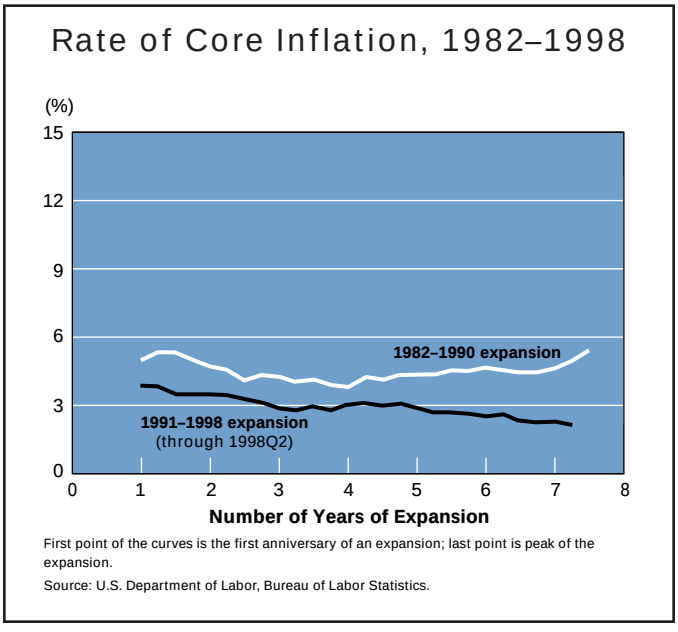


FIGURE B-4

TABLE B-1: Nonfinancial Corporations' Performance
(percent change, fourth quarter to fourth quarter)

	1997 Share of Total Payments	1995	1996	1997	1998Q2[1]
Compensation per hour		2.6	3.4	3.9	4.3
Productivity		2.2	2.4	2.6	3.0
Unit labor costs	65	0.4	0.9	1.2	1.3
Unit nonlabor costs	21	–0.3	–1.4	–1.8	–1.6
Unit profits	13	4.9	4.3	0.2	–5.1
Implicit price deflator		0.8	0.8	0.4	–0.2
Addendum					
Core CPI		3.1	2.6	2.2	2.2
Core Gross Domestic Purchases Index		2.2	1.3	1.4	0.8

[1] 1997Q1 to 1998Q1.
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

pressures and rising interest rates. In past expansions, the rate of core inflation (as measured on consumer prices excluding food and energy) always accelerated in the latter stages of the expansion after trending down early in the expansion (see Figures
B-3 and B-4). The rate of inflation was rising rapidly at the end of the 1975–1980 expansion and modestly at the end of the 1982–1990 expansion. In strong contrast, the rate of core inflation has continued to trend down in the current expansion. In the seventh year of this expansion (March 1997 to March 1998), core prices increased just 2.1 percent, less than in prior years.

The tight labor markets in 1997 and early 1998 put some upward pressure on labor costs. Hourly compensation rose 4.3 percent in the second quarter of 1998 from the year-ago level, a pickup from the 3.1 percent rise in the year 1996 (see Table B-1). Faster growth in hourly compensation, however, does not necessarily translate into a higher rate of inflation. Prices charged by nonfinancial corporations actually edged down 0.2 percent in the second quarter of 1998 from their level a year before. For these businesses, the rapid growth in compensation has been accommodated by a combination of strong productivity gains, declines in nonlabor costs per unit of output, and a drop in profit margins.

The profit margins of nonfinancial corporations (the ratio of profits to nominal GDP) have declined from the 29-year high posted in 1997 but remained at a relatively high level in mid-1998. If that decline persists, it will dampen future investment levels.

International Trade

The appreciation in the U.S. dollar's value relative to most foreign currencies in recent years, the financial and economic turmoil in the Asian developing countries in the second half of 1997, and the recession in Japan in late 1997 and early 1998 contributed to a sharply higher trade deficit in mid-1998.

The U.S. trade deficit in goods and services jumped to $176 billion at an annual rate in the second quarter, well above the $110 billion deficit for all of 1997. As a percent of GDP, the deficit rose to 2.1 percent from 1.4 percent for all of 1997. Although the current deficit is the largest ever in nominal dollars, the deficits in the mid-1980s were much higher as a percent of GDP.

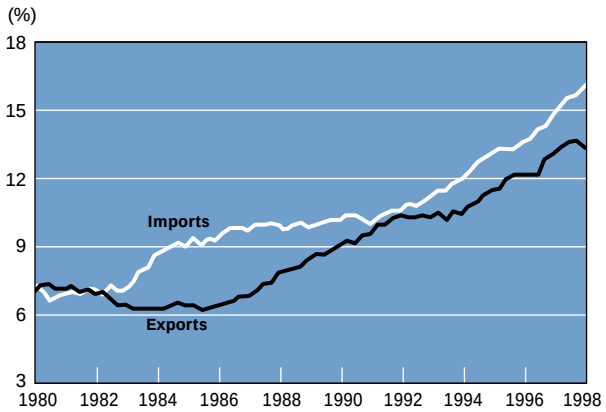


FIGURE B-5

The deterioration in the trade deficit in 1998 reflected weak exports and continued strength in imports (see Figure B-5). Exports of goods and services adjusted for inflation have dropped as a share of GDP. In contrast, real imports as a share of GDP have continued their strong upward trend.

Exchange rates have an effect on U.S. international trade. The trade-weighted value of the U.S. dollar moved sharply upward in late 1997 and early 1998 to its highest level since 1986. In contrast, during the 1987–1996 period, the value of the dollar fluctuated with no clear upward or downward trend. In early October 1998, the dollar stood about 10 percent above its 1987–1996 average. This relatively high level, if sustained, will likely dampen the growth rate of U.S. exports in 1999 and boost the growth rate of U.S. imports.

Recession and declining investment through much of east Asia have depressed U.S. exports since the high reached in October 1997. Most U.S. exports to the area are capital goods. The value of goods exports to several Asian countries dropped sharply in the first 7 months of 1998 from their year-ago level—down 52 percent to Indonesia, 46 percent to Korea, 29 percent to Thailand, and 12 percent to Japan (see Table B-2). Goods exports to other regions continued to expand in 1998 but, in many cases, at slower rates than in 1997. For example, exports to Canada rose 5 percent in the first 7 months of 1998 from their year-ago level, down from the 1997 pace of 13 percent.

Economic Outlook for 1999 and 2000

TABLE B-2: U.S. Merchandise Exports

	Share of 1997 Exports	Percent Change from Year-Ago Level	
		1997	Jan.-July 1998
Total exports	100	10.3	1.8
Indonesia	1	13.7	–52.1
South Korea	4	–5.9	–46.0
Thailand	1	2.1	–29.1
Japan	10	–3.0	–11.7
Mexico	10	25.7	16.6
South and Central America	9	19.8	7.2
Canada	22	13.1	4.7
Western Europe	23	9.8	3.5

Source: U.S. Department of Commerce, Bureau of the Census.

Consumer spending, which accounts for roughly two-thirds of overall spending, should remain fairly vigorous in 1999. Consumer spending, after adjusting for inflation, increased at a 4.4 percent annual rate in the six quarters ending in mid-1998. Healthy advances in real disposable personal income (income after taxes and adjusted for inflation) and payroll employment, combined with historically high levels of consumer confidence, have supported the sizable increase in consumer spending so far in 1998.

Growth in consumer spending may be slowed, however, by the decline in the stock market or even a plateau. In 1997, households received $60 billion in dividends from mutual funds that were derived from capital gains that represent 0.9 percent of personal income, up from an estimated 0.3 percent in 1987. The 1987 fall in stock prices had little effect on consumer spending, but the influence may be more apparent this year because of the larger impact on income.

The outlook for slower economic growth rests primarily on the prospects for a widening trade deficit. In each of the first two quarters of 1998, falling net exports pulled down the GDP growth rate by more than 2 percent. Total exports, after adjusting for inflation, declined in the first two quarters of 1998. Employment in capital equipment and electronic components, two manufacturing sectors most sensitive to exports, fell at a 3 percent rate from their peak in the spring of 1998 to the fall. (See "World Economic Outlook" for a discussion of the economic prospects for Asia and other regions of the global economy.)

The events in Asia appear to have accelerated a longer-term downward trend in U.S. prices for imported nonpetroleum goods. The ongoing drop in these import prices no doubt has contributed to the favorable performance in the rate of inflation of consumer goods. Lower import prices directly affect the prices paid by consumers for imported goods at the retail level. Lower prices also indirectly affect the prices charged by domestic producers via lower costs for materials inputs and greater competitive pressures. In addition, slower domestic growth will reduce price pressures caused by tight labor markets.

The Asian effect on international capital flows and the outlook for slower U.S. growth no doubt has put downward pressures on U.S. interest rates. The yield on 30-year Treasury bonds trended downward from its peak of 7.12 percent in April 1997 to less than 5 percent in October, the lowest yield for a long-term government bond since 1967. Lower long-term interest rates, combined with favorable weather patterns, boosted home-building activity to record levels in the first 8 months of 1998. Lower rates have also helped to sustain an upward trend in private nonresidential construction.

Looking ahead, the Department of Commerce and DRI expect moderate growth, moderate inflation, and somewhat higher unemployment rates in 1999 and 2000 (see Table B-3). Forecasts, however, always involve uncertainties. To signal the uncertainties, the forecasts of key indicators that underlie *Outlook '99* are presented as ranges rather than point estimates.

The economy should grow between 1.7 and 2.7 percent per year in 1999 and 2000, a favorable performance but down considerably from the expected 1998 gain of 3.4 percent. It is anticipated that in 1999 the rate of inflation, as measured by changes in the consumer price index, would remain below 3 percent and the unemployment rate slightly below 5 percent. The expected pickup in the overall inflation from the anticipated 1998 pace reflects, in large part, the expected end of the price declines at the retail level that were related, in turn, to the weakness in crude oil prices during 1997 and so far in 1998.

Outlook '99 forecasts essentially match those prepared by private analysts and the administration (see Table B-3). The *Blue Chip* estimates shown in the table are the averages of the highest and lowest 10 forecasts that make up the *Blue Chip* consensus. *Blue Chip* forecasts of GDP growth for 1999 range from 1.9 to 2.9 percent. The difference between *Outlook '99* and *Blue Chip* estimates for 1999 is on the upper bound and likely reflects the date the forecasts were prepared. The economy performed better than anticipated in early 1998. The *Blue Chip* estimates published in September 1998 reflect that performance while the *Outlook '99* estimates prepared in March

TABLE B-3: Economic Forecasts for 1999 and 2000[1]

	Actual 1997	Forecasts 1998	1999	2000
Real GDP (year-over-year percent change)				
Outlook '99			1.7 to 2.2	2.2 to 2.7
Blue Chip consensus	3.9	3.4	1.6 to 2.9	NA[2]
Administration			2.0	2.0
Consumer Price Index (percent change)				
Outlook '99			2.4 to 2.9	2.7 to 3.2
Blue Chip consensus	2.3	1.6	1.9 to 2.6	NA
Administration			2.1	2.2
Unemployment rate (percent)				
Outlook '99			4.5 to 5.1	5.4 to 6.2
Blue Chip consensus	5.4	4.5	4.3 to 5.1	NA
Administration			5.0	5.2

[1] The *Outlook '99* forecast was prepared in late March 1998, administration forecasts were published in June, and the *Blue Chip* consensus in September.
[2] NA = not available.

A Quick Overview of Industry and Trade Facts
U.S. Industry & Trade Outlook® 99

Chapter 1. Metals and Industrial Minerals Mining. Recycling continues to be an important element in the domestic metals supply. Old or obsolete scrap metal made up 68 percent of apparent consumption of lead, 49 percent of steel, 32 percent of nickel, 25 percent of aluminum, 24 percent of chromium, 15 percent of copper and tin, and 11 percent of zinc (p. 1-4, col. 1).

Chapter 2. Coal Mining. In 1996, almost 8 of every 10 tons of U.S. coal consumed was used to produce electricity. About 55 percent of U.S. electricity was generated by coal in 1995 (p. 2-1, col. 1). By 2015, coal will account for 47 percent of total U.S. electricity generation even as more utilities switch to cleaner-burning natural gas (p. 2-2, col. 1). U.S. coal exports are expected to increase to 102.2 million tons in 2000 and 120.6 million tons in 2015 (p. 2-3, col. 2).

Chapter 3. Crude Petroleum and Natural Gas. The worldwide consumption of natural gas has grown far more rapidly than has the consumption of crude oil in recent years. Worldwide natural gas consumption increased 25 percent between 1987 and 1996, and petroleum consumption increased 13 percent in that period (p. 3-3, col. 1). U.S. consumption of crude oil is expected to increase slightly more than 2 percent in 1999, largely because of increased demand for motor vehicle fuel (p. 3-9, col. 1).

Chapter 4. Petroleum Refining. For the U.S. refining and marketing industry, the 1990s have been characterized by unusually low product margins, low profitability, and selective retrenchment. The costs of complying with environmental laws have grown substantially during this period and thus have affected the profitability of the domestic industry (p. 4-1, col. 2). Overall net imports of petroleum products should decline nearly 8 percent in 1998, but they are likely to increase nearly 17 percent in 1999. U.S. dependence on foreign petroleum will increase substantially between 1997 and 2005 (p. 4-6, col. 2).

Chapter 5. Electricity Production and Sales. Retail competition, a proliferation of suppliers, low coal prices, efficient new generation technology, low interest rates, and lower supplier reserve margins have all contributed to the continuation of a fall in electricity prices. By 2002 the average nationwide price of electricity should be 11 percent lower than the price in 1995, an average annual decline of more than 1.5 percent (p. 5-6, col 2).

Chapter 6. Construction. In 1998 the inflation-adjusted value of new construction put in place increased 3 percent to set an all-time record ($520 billion in 1992 dollars or about $635 billion in current dollars) (p. 6-2, col. 2). In 1999 the constant dollar value of new construction put in place will increase 1 percent from the 1998 level (p. 6-1, col. 1). The United States is one of the leading construction markets in the world, employing 7.1 million people and accounting for about 7 percent of GDP (p. 6-1, col. 2).
Chapter 7. Wood Products. Trade has been an important component of the wood products industry, increasing from $13.6 billion in 1992 to $20.8 billion in 1997. However, most of this growth has been in the form of imports, which made up nearly half of U.S. trade in wood products in 1992 but which now amount to 65 percent of trade (p. 7-1, col. 1).

Chapter 8. Construction Materials. A continued modest gain in the demand for construction materials is forecast for 1999 and annually through the 2003 period, in line with a 1 percent rise in construction and a 1 to 2 percent annual increase forecast for additions, alterations, and repair work on existing structures (p. 8-2, col. 2). The highest forecast growth for individual sectors within construction materials are plumbing parts and ceramic tiles with growth projected at 4.4 percent and 3.8 percent, respectively, for 1999, and 3 to 4 percent and 2 to 3 percent, respectively through 2003 (p. 8-11, col. 2; p. 8-13, col. 1).

Chapter 9. Textiles. Most textile mill executives and industry analysts believe that the U.S. industry should remain strong and viable in the years ahead as production, shipment, and profit gains continue. Exports should grow 9.8 percent per year from 1999 through 2003, and import growth should average 7.8 percent annually over that period. Real growth in the value of industry shipments is expected to average 2.5 percent from 1999 through 2002 (p. 9-4, col. 1).

Chapter 10. Paper and Allied Products. A large modern manufacturing base, combined with an adequate transportation and distribution network and a highly skilled labor force, makes the U.S. industry the most competitive and highest-volume supplier in the world. As much as 65 percent of the industry's growth in shipments over the past decade is directly attributable to increases in exports of paper and allied products (p. 10-1, col. 1).

Chapter 11. Chemicals and Allied Products. Globalization has become a key factor in the outlook for industrial inorganic chemicals. The United States now exports almost a third of its inorganic chemical production, notably to Canada, Japan, Mexico and developing countries in Asia (p. 11-1, col. 1). The global market for organic chemicals has traditionally been dominated by developed countries such as the U.S., Germany and Japan, but in recent years the fastest growth has been registered in the developing regions of Asia, the Middle East, and Latin America (p. 11-4, col. 2).

Chapter 12. Rubber. Industry shipments of tires and inner tubes are not expected to grow more than 1 percent in 1999. Export growth is expected to resume in 1999 and gain momentum through 2002 (p. 12-5, col. 2). Product shipments of fabricated rubber products are expected to grow by 1.4 percent, and exports by 4.4 percent in 1999 (Table 12-7). Annual worldwide consumption of synthetic rubber has hovered around 9 to 9 ½ million metric tons, except for an unusual spike in 1989–90 (12-2, col. 1). U.S. product shipments are expected to grow 2.6 percent in 1999 (Table 12-3).

Chapter 13. Steel Mill Products. Demand in the U.S. grew rapidly in the 1990s. By 1997 apparent consumption of steel mill products reached 118.6 million tons, an increase of 34 percent since 1990 and 5.6 million tons above the previous peak (p. 13-2, col. 1). The economic crisis in southeast Asia and a collapse of domestic demand for steel in the former Soviet Union—Russia was the second largest supplier of U.S. steel in 1997—are having a great impact on steel markets worldwide (p. 13-1, col. 2).

Chapter 14. Nonferrous Metals. Total shipments of the aluminum industry are expected to reach 10.9 million metric tons in 1999 (Table 14-1). Refined copper production should reach 2.6 million metric tons in 1999 (Table 14-2). Total lead metal production (primary and refined) is expected to be 1.5 million metric tons (Table 14-4). Titanium ingot production is forecast at 63,000 metric tons, and zinc metal production at 400,000 metric tons (Tables 14-5 and 14-6).

Chapter 15. General Components. The screw machine product, industrial fastener, industrial valve, pipe fitting, and bearing industries are forecast to register a combined growth rate of 2.2 percent in 1999 (Table 15-1). General components exports are expected to increase about 11 percent in 1999. Significant import growth from Asia is possible because of the depreciation of a number of Asian currencies and the growing Chinese industry (p. 15-3)**.**

Chapter 16. Microelectronics. Three subsectors of the microelectronics industry are projected to be in the top ten fastest-growing U.S. manufacturing industries in 1999: printed circuit boards, with shipments growth of 14 percent; semiconductors and related devices, at 10.2 percent; and passive components, at 8.0 percent (Highlights, p. E-2; Tables 16-3, 16-5, and 16-9). U.S. exports of electronic components are forecast to grow 16.7 percent in 1999 as Asian markets stabilize, while imports should slow to 10.4 percent (p. 16-3, col. 1).

Chapter 17. Metalworking Equipment. Six subsectors are included in the metalworking equipment industry. One of these subsectors, welding apparatus, is projected to have real shipments growth of 6.3 percent in 1999, placing it ninth among the top ten fastest-growing U.S. manufacturing industries (and the only heavy manufacturer to make the list). The United States is the world's largest producer of and market for welding equipment. U.S. exports of welding equipment passed the $1 billion mark in 1997 and have continued to expand at a brisk pace (Highlights, page E-2; page 17-15, col. 2).

Chapter 18. Production Machinery. The output of production machinery industries will decline in 1999, with constant-dollar industry shipments dropping 0.5 percent. The high levels of capital spending seen in the early 1990s will not continue as uncertainty stemming from the currency crisis in Asia and subsequent volatility on key world equity markets will lead many firms to postpone further expansion and upgrading of equipment. The strong export markets which were largely responsible for growth in the mid-1990s are also forecast to experience waning demand in 1999 (p. 18-2, col. 2).

Chapter 19. Electrical Equipment. Between 1992 and 1996, electrical equipment industry shipments boomed, increasing 5.2 percent in real terms. This growth ended a negative period in 1990 and 1991 during which shipments declined more than 9 percent (p. 19-1, col. 2). The pace of growth in electrical equipment shipments ebbed slightly in 1997, with performance varying significantly between subsectors. Turbines, transformers, and switchgears had growth rates that exceeded their 1992–96 averages, while the two largest sectors, industrial controls and motors and generators, experienced a deceleration of growth (p. 19-2, col. 1). Export growth in this period surpassed 8 percent per year, again varying among subsectors.

Chapter 20. Environmental Technologies and Services. The U.S. environmental technologies sector is an industry in transition. The double-digit growth of the late 1980s slowed markedly during the 1990s as regulation-induced demand waned. Faced with slower growth, increased competition, and declining profits in the home market, U.S. companies have increasingly turned to export markets to increase their sales. In 1996, exports of U.S. environmental technologies and services generated a trade surplus of $9.3 billion (p. 20-1).

Chapter 21. Aerospace. After two years of double-digit growth, shipments of aircraft, engines, and parts will slow to around 3 percent in 1999 as a result of consolidation in the industry, lower levels of defense spending, and slowed world economic growth. However, the international market for commercial launch services will thrive over the next five years as satellite service providers rush to get their new satellites into orbit (p. 21-14). As a result, three aerospace industry subsectors are among the top ten fastest-growing U.S. industries in 1999. Industry shipments of space vehicle equipment n.e.c.,* are expected to expand by 12.8 percent; guided missiles and space vehicles, by 11 percent; and space propulsion units and parts by 9.9 percent (p. 21-1; Tables 21-9, 21-10, and 21-11).

*not elsewhere classified

Chapter 22. Shipbuilding and Repair. For the foreseeable future, the U.S. shipbuilding and repair industry will continue to have as its principal customer the U.S. navy, although the level of activity is expected to be lower than that in the previous decade (p. 22-8, col. 2). The industry has made progress in reemerging as an active participant in the commercial shipbuilding market largely as a result of the National Shipbuilding and Conversion Act of 1993 and the expanded Title XI Federal Ship Financing Guarantee Program (p. 22-1, col. 1).

Chapter 23. Industrial and Analytical Instruments. In 1997, exports accounted for more than 35 percent of all shipments, and this trend will continue through 1999 (Table 23-1). Industrial and analytical

instrument product shipments are projected to expand at over a 3 percent annual rate through 2003, reaching $56 billion in 2003. Five-year growth rates for the industry's three subsectors are as follows: laboratory instruments, 19 percent; measuring and controlling instruments, 13 percent; instruments to measure electricity, 15.2 percent (Table 23-10).

Chapter 24. Photographic Equipment and Supplies. The convergence of photographic, digital-imaging and computing technologies has thrust the photographic equipment and supplies industry into uncharted territory. While traditional silver-based photography is still the foundation of the industry, demand in this segment is soft. Meanwhile, the traditional analog photocopier is being supplanted by multifunction digital photocopiers, whose sales should grow to half a million by 2001.

Chapter 25. Printing and Publishing. In 1998 the industry had approximately 70,000 establishments, a work force of 1.5 million, and a value of shipments totaling $211.billion (p. 25-1, col. 1). Value of shipments is predicted at $219 billion in 1999 (p. 25-3). Foreign markets for U.S. printed products show every sign of expanding in the years ahead.

Chapter 26. Information Services. One of the most significant trends is convergence within the industry, as companies in such diverse areas as hardware, software, telecommunications and World Wide Web development are forming alliances. Exports of information services totaled nearly $5 billion in 1996, and growth is expected to continue to nearly $8 billion in 1999 (Table 26-7).

Chapter 27. Computer Equipment. The computer equipment and peripherals industry is one of the top 10 fastest-growing U.S. industries in 1999 (Highlights, page E-2). While business and government will temporarily divert spending on computer hardware in order to handle the year 2000 problem, product shipments will gain from a recovery in exports and greater worldwide demand for servers, workstations, and PCs priced under $1,000 for the home market. Exports are expected to increase 9 percent to $48 billion in 1999, but imports will likely grow even faster, reaching $92 billion (p. 27-5, col. 2).

Chapter 28. Computer Software and Networking. Employment in this industry continues to flourish, growing at 9 percent annually. The Bureau of Labor Statistics estimates that jobs generated by the packaged software industry will account for nearly 3 percent of all U.S. employment by 2005 (p. 28-2, col. 1). By 2003, the packaged software market is expected to grow to $62.2 billion (p. 28-4, col. 1) and the CAD/CAM/CAE software market to $6.2 billion (p. 28-8, col. 2). Latin America will be the fastest-growing market for worldwide data communications between 1996 and 2003 (Figure 28-2).

Chapter 29. Space Commerce. The commercial space market will continue its steady growth for the next five years (p. 29-1, col. 2). Global commercial satellite launches to geostationary transfer orbit grew by 14 percent in 1997 and this was expected to be duplicated in 1998 (p. 29-2, col. 1). Exports of U.S. launch services will increase as additional foreign customers add launches to their telecommunications systems. Asia will be the primary market (p. 29-3, col. 1).

Chapter 30. Telecommunications Services. Demand and revenue growth should remain strong in the three primary basic services sectors—telephone services, wireless communications, and satellite communications. Total U.S. revenues for basic voice and data services are seen increasing about 8 percent in 1999 to reach nearly $270 billion, and they are predicted to continue at that level, reaching nearly $375 billion in 2003 (p. 30-3, col.2). Growth in the U.S. industry will be fueled in part by expanding opportunities in foreign markets. Many of these were only recently opened to competition under the auspices of the World Trade Organization's Agreement on Basic Telecommunications Services, a milestone in this industry (p. 30-1, col. 1).

Chapter 31. Telecommunications and Navigation Equipment. Shipments by the telecommunications

equipment industry are projected to increase about 7 percent in 1999. Product areas leading this growth include wireless communications equipment and network equipment. Shipments of radio and television broadcasting and communications equipment are expected to rise about 10 percent, making it one of the top ten fastest-growing U.S. industries in 1999 (p. 31-3; Highlights, p. E-2). Trade makes up a significant part of U.S. production and consumption of telecom equipment: in 1997, 23 percent of U.S. product shipments were exported, and imports accounted for 20 percent of apparent consumption (p. 31-1).

Chapter 32. Entertainment and Electronic Media. U.S. consumer expenditures on movies, home video, cable television, and recorded music reached an estimated $60.3 billion in 1997. This figure should climb to some $65.1 billion in 1998, $69.2 billion in 1999, and $90 billion in 2003 (in current dollars). From 1999 to 2003, growth is projected at 30 percent. U.S. revenues from exports of film and television tape rentals are projected to rise to $10 billion by 2003 (p. 32-2, col. 1).

Chapter 33. Apparel and Fabricated Textile Products. U.S. consumer expenditures on apparel have slowed significantly in the past decade (p. 33-2, col. 1). Nonetheless, imports grew 16.5 percent in 1997, more than double the 7 percent average annual growth rate seen between 1992 and 1996 (p. 33-3, col. 1). Exports are still strong, however; apparel exports rose 16 percent from 1996 to 1997, reaching $7.8 billion (p. 33-8, col. 2). NAFTA partners Canada and Mexico account for the majority of U.S. exports of textile products and are still among the fastest-growing markets (p. 33-9, col. 2).

Chapter 34. Footwear, Leather and Leather Products. In 1997, this industry suffered declines in shipments. These sectors are mostly quite labor-intensive, and thus subject to pressure from imports (p. 34-2, col. 2). In the footwear sector, though shipments were expected to decline about 14 percent in 1998, a 2 percent increase is projected for 1999.

Chapter 35. Processed Food and Beverages. This is the largest manufacturing sector in the U.S. Industry shipments were projected to reach $480.5 billion in 1998 (p. 35-1, col. 1), and the projection for the next five years is for constant-dollar shipments to grow between 1.5 and 2.5 percent annually. Most subsectors—red meats, snack foods, and the like—will track this same modest growth, but alcoholic beverages may see a slightly better growth in exports than the other sectors, increasing 3 to 8 percent annually in the next five years (p. 35-14, col. 2).

Chapter 36. Motor Vehicles. This is a large, mature market, and most of the cars and light trucks produced in the U.S. are geared for the U.S. market. Production has increased faster than sales over the past decade (p. 36-11, col. 2), but a mild improvement is likely. In 1997, the U.S. produced 22 percent of world vehicle output, and this share should rise through 2003 to 27 percent (p. 36-12, col. 1). Nonetheless, imports are likely to increase 4.8 percent from 1998 to 1999, while exports will increase only 0.6 percent (Table 36-4).

Chapter 37. Automotive Parts. Between 1993 and 1997, global sales by the world's top 10 automotive parts manufacturers jumped nearly 47 percent to $114 billion (p. 37-2, col. 1), and the U.S. auto parts industry has profited by this trend. In 1997 industry shipments reached a record $157 billion. By 2003 shipments should approach $189 billion (p. 37-5, col. 1). Latin America and Asia are expected to be key export markets. Imports are expected to grow slowly, reaching $54 billion in 1998, $55 billion in 1999, and $63 billion by 2003 (p. 37-6, col. 1).

Chapter 38. Household Consumer Durables. The 1997–98 economic crisis in Asia has had a noticeable effect on this market. Furniture shipments seemed the least affected, bringing in $28.5 billion in 1998, a 4 percent increase over 1997 shipments (p. 38-1, col. 1). NAFTA countries continue to be the major export market (Figure 38-8). Household appliances also saw a modest increase, with 1998 shipments ($20.5 billion) increasing 2 percent over 1997's level (p. 38-9, col. 1). In lawn and garden

equipment, the value of U.S. exports was three times that of imports (Table 38-6). Household audio and video equipment has seen a significant sales decline in the past year (p. 38-14, col. 2), and growth is likely to be sluggish in the near future.

Chapter 39. Recreational Equipment. Industry shipments were projected to reach $22.4 billion in 1998, up only 0.4 percent (p. 39-1, col. 2). Growth is due mainly to exports, which increased 6 percent from 1997 to 1998. Shipments are likely to increase only 1.5 percent annually (in constant dollars) over the next five years (p. 39-2, col. 2). Western Europe and the NAFTA countries— particularly Canada—are the major markets for U.S. recreational equipment, and exports to these counties should continue to increase over the next five years, though at a slower rate (p. 38-3, col. 2).

Chapter 40. Other Consumer Durables. U.S. shipments of jewelry in constant dollars are unlikely to change much over the next few years as increasing imports capture additional consumer spending. In musical instruments, 1998 saw a modest increase in shipments—2 percent over 1998—and 1999 is expected to see the same trend.

Chapter 41. Wholesaling. Wholesale distribution has been remarkably stable over the past 70 years, amounting to about 5 percent of the national accounts and making up about five percent of U.S. employment throughout this century (p. 41-1, col. 2). Sales growth for merchant wholesaler-distributors has exceeded overall U.S. economic growth during the past decade and is projected to continue to do so. By 2000 sales should approach $3 trillion (p. 41-6, col. 2). Sales for export increased sharply in recent years: from 6.1 percent in 1987 to 7.8 percent in 1992, for a dollar increase of $53.9 billion. The importance of merchant wholesaler-distributors in international trade will continue to grow substantially over the next 5 years (p. 41-3, col. 1).

Chapter 42. Retailing. Sales growth in this sector is likely to be moderate between 1998 and 2003, hovering around 4 percent (p. 42-1, col. 1). High levels of consumer debt and declining consumer spending may have negative effects. Real consumer spending on durable goods is likely to decline 4.2 percent between 1998 and 2002, but spending on nondurables may increase 3.5 percent during the same period (p. 42-1, col. 2). In terms of foreign expansion, Asia continues to be the best region for retailers.
Chapter 43. Transportation. U.S. airlines earned a record $7.9 billion in profits in 1997, the fourth consecutive year of growth, and 1998 was expected to continue the trend (p. 43-2, col. 1). Growth is likely to continue, but slow, through 2003, as international traffic outpaces domestic traffic (p. 43-5, col. 2). Railroads have increased their freight shipments for the past six or seven years, and productivity has increased dramatically (p. 34-8, col. 2). In the passenger service sector, the industry continues to struggle. The trucking industry has grown rapidly over the past 50 years, but private freight transportation revenues are projected to shrink from 45 percent of the market to 42 percent between 1997 and 2006 (p. 43-13, col. 2). In the water transportation sector, the modest growth seen since 1993 is likely to continue, with water transportation increasing its contribution to U.S. GDP by 2 percent annually between 1998 and 2002 (p. 43-19, col. 2).

Chapter 44. Health and Medical Services. Health care reform continues to be an important issue in the United States and is increasingly so abroad. U.S. outlays for health care in 1999 are projected at $1.2 trillion (p. 44-2, col. 2), and this is not expected to change much in the next five years. International trade in medical services has risen modestly over the 1990s and will likely continue to do so (Table 44-2). Asia is a particularly important market for U.S. medical services (p. 44-6, col. 1).

Chapter 45. Medical and Dental Instruments and Supplies. The global medical instruments industry is expected to grow steadily in the years ahead, and the U.S. industry with it. Growth of 5 percent is likely for 1999 (Table 45-1). This industry is relatively unaffected by regional economic cycles. The U.S. medical device industry exported more than $1 billion to emerging markets in Asia in 1998 (p. 45-6, col. 2), and

this region will continue to be a major market.

Chapter 46. Insurance. The U.S. insurance market remains the second largest in the world, behind that of Japan (p. 46-3, col. 2). Growth is likely to come from markets outside the United States, particularly in Asia and Latin America (p. 46-1, col. 2). Growth in the property and casualty sector is likely to remain strong at least through 2003 (p. 46-6, col. 2).

Chapter 47. Financial Services. Traditional lines between banking and other financial services have been blurring, and banks and thrift organizations are taking advantage of opportunities for expansion. Banks saw a sixth consecutive year of record profits ending in 1997, and 1998 bid fair to continue the trend (p. 47-1, col. 2). On the international front, the introduction of the euro will put U.S. banks at a significant competitive advantage because they were ahead of their European counterparts in setting up pan-European banking systems during the 1990s (p. 47-6, col. 2).

Chapter 48. Securities and Commodity Futures Trading. At the end of 1997, markets worldwide set records for trading volume and volatility. Much of 1998 saw the same fluctuation, with a new record in shares traded set in September (p. 48-1, col. 1). The U.S. securities industry continues in a historic bull market, largely resulting from increasing money flow and technology, and this sector is a major engine of growth in the U.S. economy. The most visible technology trend is the growth of Internet trading (p. 48-3, col. 2).

Chapter 49. Professional Business Services. The market for professional business services is growing more rapidly overseas than in the U.S. The trend for globalization and standardization of systems and processes continues. Advertising remains strong, with magazine and television advertising hitting record highs at the end of 1997 (p. 49-3, col. 1). Large-scale mergers and separations continue to be the rule; notable in 1998 was the contentious breakup of Arthur Andersen and Andersen Consulting (p. 49-2, col. 2).

Chapter 50. Education and Training Services. Spending for public and private education and workplace training in 1996–97 accounted for a larger percentage of the economy than any other sector except health and medical services (p. 50-1, col. 1). A birthrate spike that peaked in 1990 will likely cause elementary school enrollments to grow through 2007. Post-secondary school enrollments will have grown nearly 2 million between 1997 and 2000 (p. 50-1, col. 2).

The Ten Fastest-Growing U.S. Industries

U.S. Industry & Trade Outlook® '99

Printed Circuit Boards: The ever-continuing demand for faster, smaller, more functional electronic products fuels the demand for PCB's—the "nervous system" of electronic devices. Industry shipments are expected to increase 14 percent in 1999 to makers of computer, telecommunication, automotive, consumer electronics, and all other information technology end markets.

Space Vehicle Equipment: The international market for commercial launch services will thrive over the next five years as providers of satellite services rush to get their new satellites into orbit. Industry shipments of space vehicle equipment are expected to expand by 12.8 percent in 1999. The high demand for launches will be fueled by the appearance of several new launch services providers.

Guided Missiles and Space Vehicles: Industry consolidation and success in reducing production costs by upgrading existing weapons systems rather than looking to new developments of missile systems will help this aerospace industry subsector to grow an estimated 11.0 percent in 1999. Exports of guided missiles and launch vehicles will remain strong with air defense missiles continuing to be the largest portion of the global missile market.

Semiconductors and Related Devices: Shipments by the U.S. semiconductor industry is estimated to rise 10.2 percent over 1998, reaching an equivalent value of $115.8 billion in 1992 dollars. Semiconductors and related devices, which are often called computer chips, are found in a multitude of electronic products and systems from computers, consumer electronics and telecommunications equipment, to automobiles, aircraft and military and defense electronic systems.

Radio and TV Communications Equipment: Industry shipments of radio and television broadcasting and communications equipment, which represent 53 percent of total shipments from the U.S. telecommunications equipment industry, are estimated to rise about 10.0 percent to $45.4 billion in 1999, up from an estimated $41.3 billion in 1998. Pressure to reduce costs and improve productivity in a highly competitive market environment, coupled with mergers and consolidation among manufacturers, are expected to contribute to slower growth in 1999.

Space Propulsion Units and Parts: The commercial space launch industry is expected to experience steady growth through 1998 and 1999, while launches of new satellite systems such as Iridium and Global-star are in high demand. Industry shipments of space propulsion units and parts are expected to increase 9.9 percent in 1999.

Computers and Peripherals: The U.S. computer equipment industry's product shipments in current dollars should rebound in 1999, rising 10 percent to an estimated $112 billion. Unit shipments of computer systems will increase at a rapid pace, but severe price competition in PCs and hard disk drives will dampen overall growth in computer equipment value slightly. U.S. computer equipment exports are expected to increase 9 percent to $48 billion in 1999.

Passive Components: The outlook for the passive components and electron tubes industries is very positive, particularly with the expected growth of the information technology era and the continued emergence of new international markets. Shipments by U.S. industry of passive components are expected to grow 4.3 percent in 1998 and 6.7 percent in 1999 to reach a value of $48.3 billion.

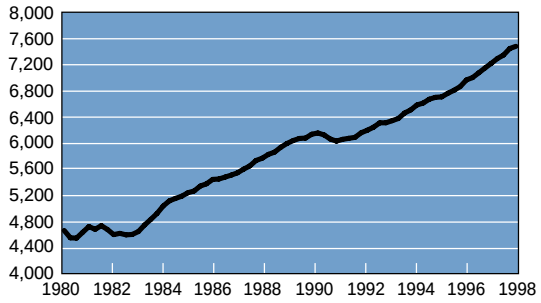
Welding Apparatus: Industry shipments of welding apparatus are expected to grow an estimated 7.3 percent in constant 1992 dollars in 1999. Product shipments of welding apparatus are expected to reach a record $4.3 billion in 1999, up 8.5 percent in current dollars, while reaching $3.56 billion in constant 1992 dollars, or 7.3 percent above the estimated 1998 level. Leading markets for welding equipment include the automotive and automotive repair, nonresidential construction, petroleum, and bridge building.

Telecommunications Equipment: Shipments by the U.S. telecommunications equipment industry are expected to increase about 6.9 percent in 1999, reaching $81.1 billion in constant 1992 dollars, up from an estimated $75.9 billion in 1998. Product areas leading this growth include wireless communications equipment and network equipment, including that for wireless networks. Employment in communications and radio and television broadcasting equipment industry rose 3 percent to about 240,000 in 1997, reflecting continued growth in the industry.

U.S. Economic Trends

The economy has considerable strength

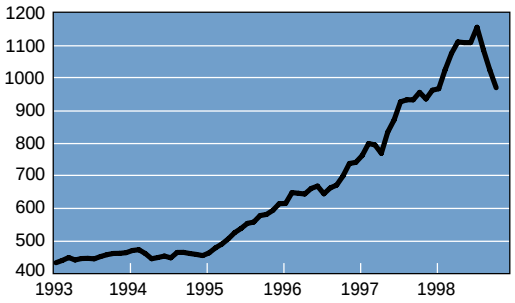
REAL GROSS DOMESTIC PRODUCT
(billions of 1992 dollars)



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

but the stock market wavers;

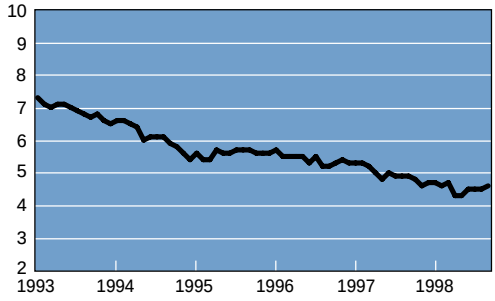
STANDARD & POOR'S 500 INDEX



Source: Standard & Poor's/DRI.

employment remains strong

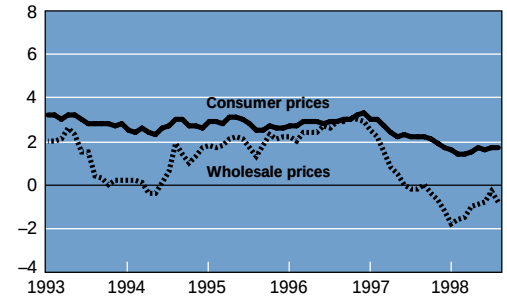
UNEMPLOYMENT RATE
(percent)



Source: U.S. Department of Labor, Bureau of Labor Statistics.

and inflation is moderate;

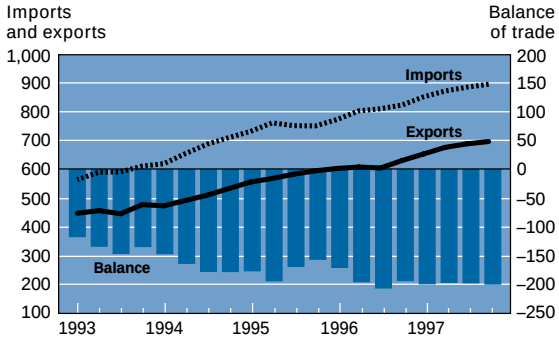
INFLATION RATE
(percent change from a year ago)



Source: U.S. Department of Labor, Bureau of Labor Statistics.

the trade deficit worsens as exports flatten

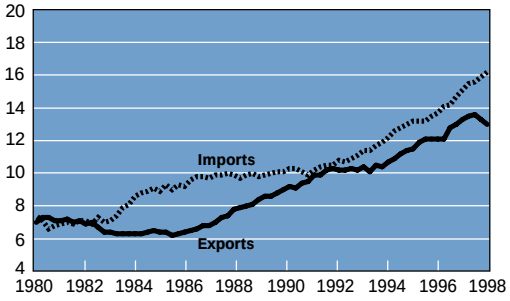
MERCHANDISE TRADE
(billions of dollars, annual rate)



Source: U.S. Department of Commerce, Bureau of the Census.

and exports decline relative to GDP.

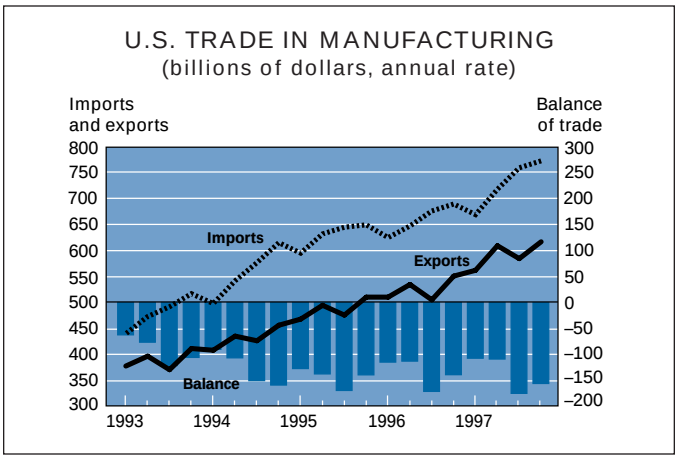
EXPORTS' AND IMPORTS' SHARE OF GDP
(constant 1992 dollars basis; percent)



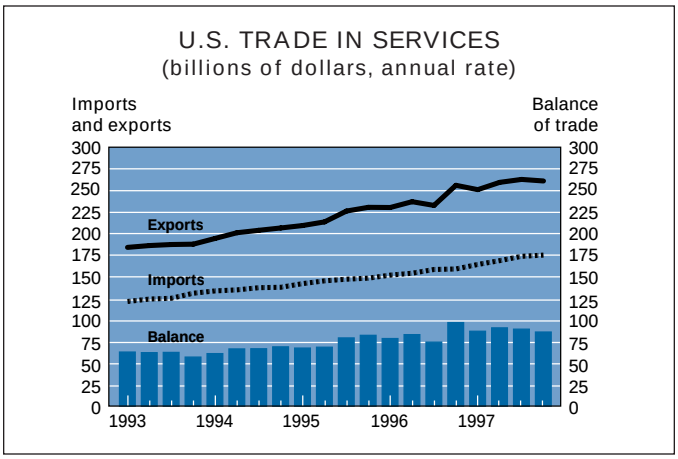
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

U.S. Trade Trends

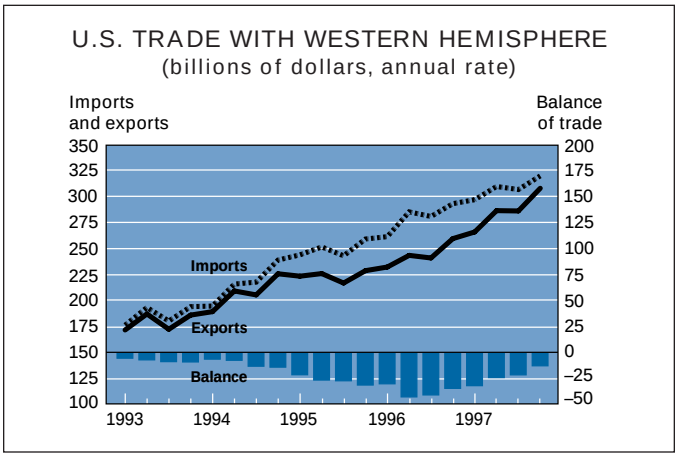
Manufacturing exports slow and the deficit widens;



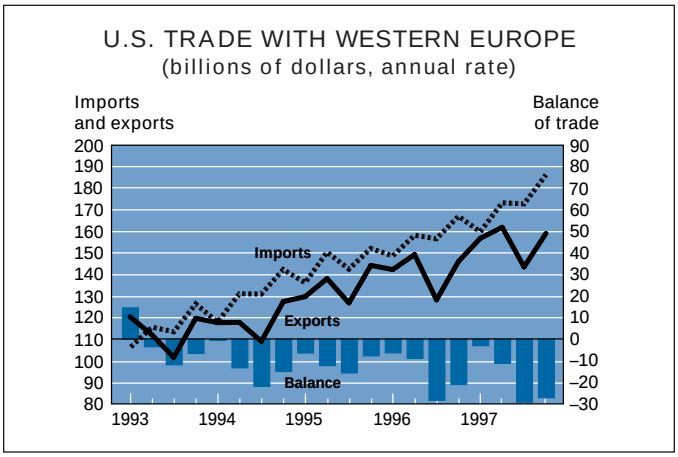
the trade surplus in services declines;



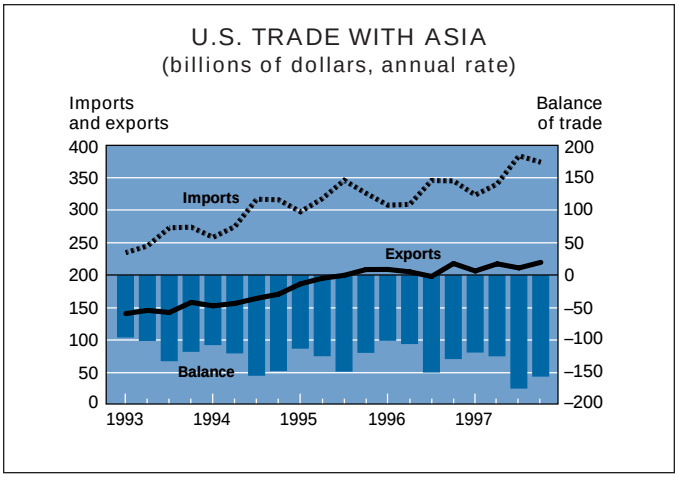
trade with the Western Hemisphere is improving,



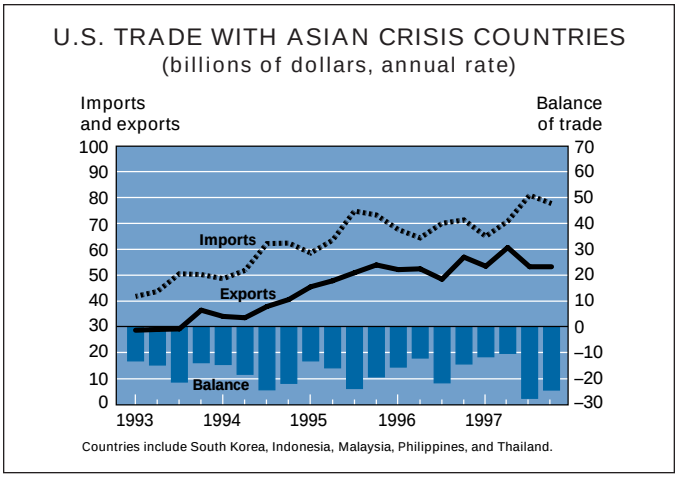
but there is some deterioration with Europe



and a worsening with Asia,



particularly with countries in crisis.



Source: U.S. Department of Commerce, Bureau of the Census.

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